

culms producing the terminal staminate panicles, the glume and sterile lemma equal, 5 to 6 mm. long, acuminate, the glume 5-nerved, the lemma 3-nerved, both with a few obscure cross veins; fruit 3 mm. long, about 2 mm. wide and 3 mm. thick, smooth, dull white, becoming strikingly mottled with grayish brown, the lemma 5-nerved, cucullate, strongly gibbous, abruptly apiculate; palea narrow; rachilla joint remaining attached at base, as a white porcelain-like callus.

Type in the U. S. National Herbarium no. 1,255,920, collected on a moist gentle slope above streamlet, near Bello Horizonte, Minas Geraes, Brazil, March 25, 1925, by Agnes Chase (no. 9057). Known only from the type collection.

Field notes state that the plants were firmly rooted, forming a colony under coarse herbs and *Paspalum paniculatum* L., the long pistillate culms tangled under vegetation, very slender but not readily breaking in untangling; staminate panicles relatively few, the spikelets falling readily; blades flat but curling almost instantly when plants were dug. The colony was found about half a kilometer beyond the end of the Calafate bonde [street car line]. The specific name refers to Bello Horizonte, the beautiful capital of Minas Geraes, and also to the widely creeping pistillate culms.

This third species of *Lithachne* is strikingly different from the two previously known species, *L. pauciflora* (Swartz) Beauv., rather widely distributed in the American tropics, and *L. pineti* (Wright) Chase, known only from Cuba. *Lithachne pineti*, to which it is the more nearly related, is a much smaller, more delicate species, with smaller blades and spikelets, the fruits smaller, the palea pubescent with thick hairs toward the base.

OLYRA SAMPAIANA Hitchc. Journ. Washington Acad. Sci. 17:215, f. 1.—1927.

The type specimen, collected at Reeve, Estado do Espirito Santo, by José Vidal, is almost without underground parts. Specimens collected in 1929 at Alegre, Espirito Santo, about 20 kilometers west of Reeve (Chase 10049), show that the roots bear fleshy potato-like bodies, 1 to 2 cm. long and 5 to 8 mm. thick.

BOTANY.—*Centrochloa*, a new genus of grasses from Brazil.<sup>1</sup> JASON R. SWALLEN, Bureau of Plant Industry.

Material of a new genus of the tribe Paniceae was collected by the author in the state of Maranhão, Brazil, during a collecting trip in the early part of 1934. It occurs rather commonly on sterile sandy soil in the states of Maranhão and Goyaz in the valley of the Tocantins river, in the region of Carolina. The name of the genus is taken from the Greek *κεντρον* spur, and *χλοα*, grass, referring to the pointed callus which extends well below the articulation between the pedicel and the spikelet.

<sup>1</sup> Received for publication February 7, 1935.

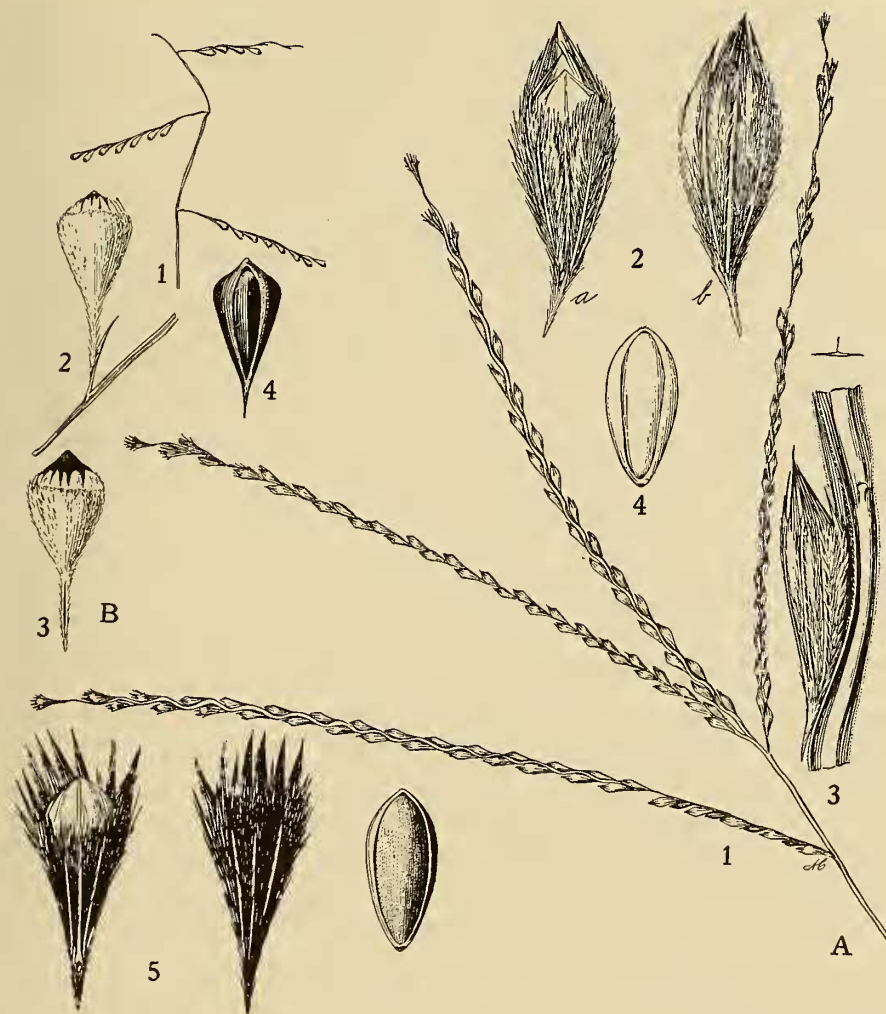


Fig. A.—*Centrochloa singularis*, from type. 1. Panicle,  $\times 1$ . 2. Two views of spikelet, *a*, from side of sterile lemma, showing the glabrous summit and the scar (at summit of callus) of attachment to pedicel; *b*, from side of second glume,  $\times 10$ . 3. Three-quarter view of spikelet attached to the narrowly 3-winged rachis, showing the base of callus free from the rachis; pedicel (to right) from which spikelet has fallen; Cross section of rachis (above),  $\times 10$ . 4. Fruit,  $\times 10$ . 5. Two views of mature spikelets and fruit,  $\times 10$ , from Swallen 3704.

B.—*Spheneria kegelii*, from Spruce 884. 1. Panicle,  $\times 1$ . 2. Spikelet, from side of sterile lemma, about to fall from the pedicel, showing the oblique articulation from the relatively long pedicel,  $\times 10$ . 3. Spikelet from the side of second glume showing linear scar of attachment to pedicel,  $\times 10$ . 4. Fruit,  $\times 10$ .

*Centrochloa* Swallen, gen. nov.

Spiculae solitariae, biserialae, breviter pedicellatae pedicellis infra spiculum articulatis, lemmate fertile a rachi averso; callus infra articulum elongatus, arcuatus, acuminatus; gluma prima nulla; gluma secunda subhyalina, cucullata, inter nervos dense hispida; lemma sterile glumae secundae simile, pilis brevioribus; lemma fertile oblongum, marginibus planis.

Gramen annuum, laminis conduplicatis, racemis 2-7 subdigitatis divergentibus.

Spikelets solitary, with the back of the fertile lemma turned away from the rachis, short-pedicellate, readily disarticulating from the pedicel, in two rows on one side of a narrowly winged rachis, the rows separated by a wing on the midrib; callus elongated below the articulation, slender, acuminate, arcuate, pointed; first glume wanting; second glume and sterile lemma equal, thin, prominently 3-nerved, hoodshaped, enclosing the fruit, appressed-hispid between the nerves; fruit indurate, oblong, brown at maturity, minutely striate, the margins of the lemma tightly enclosing the palea, not inrolled.

Annuals with conduplicate blades and two to several sub-digitate, slender, ascending or spreading racemes.

*Centrochloa singularis* Swallen, sp. nov.

Annua; culmi erecti, 10-75 cm. alti, glabri, ramosi; vaginae compressae, carinatae, glabrae vel margine papilloso-pilosae; ligula truncata, 0.5 mm. longa; laminae conduplicatae, glabrae, 5-15 cm. longae, 3-8 mm. latae, suprema valde reducta; racemi 2-7, 3-14 cm. longi, rachi 0.5 mm. lata, marginibus scabris; spiculae 3.5-4 mm. longae; gluma secunda et lemma sterile 3-nervia, inter nervos dense hispida, pilis glumae secundae quam spiculis longioribus, pilis lemmatos sterilis quam spiculis brevioribus; lemma fertile 2-2.3 mm. longum, viride vel fuscum, apice minute hispidum.

Annual; culms 10-75 cm. tall, mostly single, sometimes 2 or 3, erect, glabrous, branching at all the nodes, the branches enclosed in the sheaths until after maturity of the primary panicle; sheaths compressed-keeled, glabrous or sparsely papillose-pilose on the margins, the lower ones short, overlapping, the two upper elongate but shorter than the internodes; ligule truncate, 0.5 mm. long; blades conduplicate, arcuate, ascending to spreading, glabrous, 5-15 cm. long, 3-8 mm. wide, or smaller in depauperate specimens, the uppermost blade much reduced; racemes 2-7, 3-14 cm. long, the rachis narrowly winged, 0.5 mm. wide, glabrous, the margins scabrous; spikelets obconic, 3.5-4 mm. long, the pedicel very short; second glume and sterile lemma equal, covering the fruit, prominently 3-nerved, appressed-hispid between the nerves, glabrous at the summit, the hairs golden or purple, those on the second glume exceeding the spikelet, those on the sterile lemma shorter than the spikelet, at maturity becoming purplish-black, clustered into stiff points standing away from the spikelet, appearing like a tiny crown; fruit 2-2.3 mm. long, oblong, striate, minutely hispid at the tip, pale green, turning chestnut brown at maturity.

Type in the U. S. National Herbarium no. 1,611,707, collected in open, sandy places between Barra do Corda and Grajahú, Maranhão, Brazil, March 4, 1934, by Jason R. Swallen (no. 3703).

Open sterile sandy land, northeastern Brazil.

MARANHÃO: Between Barra do Corda and Grajahú, *Swallen* 3703, 3704; between Carolina and Riachão, *Swallen* 4006, 4008, 4021.

GOYAZ: Philadelphia, *Swallen* 3921.

*Centrochloa* is closely related to the monotypic genus *Spheneria*.<sup>2</sup> These two genera apparently present a case of parallel development, the first from *Axonopus* since the spikelets are placed with the back of the fruit turned away from the rachis, and the second from *Paspalum* since the back of the fruit is turned toward the rachis. In both *Spheneria* and *Centrochloa*, the spikelets readily disarticulate from the pedicel, the articulation in the first being long and oblique and in the second small and round. Furthermore, the spikelets of *Spheneria* are not spurred as are those of *Centrochloa*, and the base of the fruit is long acuminate, while that of *Centrochloa* is blunt as in *Axonopus*.

<sup>2</sup> *Spheneria* Kuhl. Comm. Linhas Telegraph. Estrat. Matto Grosso 67: 57. 1922.

Based on a single species *S. setifolia* (Doell) Kuhl.

*Spheneria kegelii* Pilger, Repert. Sp. Nov. Fedde 26: 228. 1929. Based on *Paspalum kegelii* C. Muell.

*Paspalum kegelii* C. Muell. Bot. Zeit. 19: 324. 1861. "Surinam, in arenosis prope Mariepaston Majo 1846: Kegel (Coll. no. 1316)."

*Paspalum setifolium* Doell in Mart. Fl. Bras. 2<sup>o</sup>: 61. 1877. "Habitat in regione Amazonica prope Manaos (Spruce n. 884 et 1360)."

*Spheneria setifolia* Kuhl. Comm. Linhas Telegraph. Estrat. Matto Grosso 67: 57. 1922. Based on *Paspalum setifolium* Doell.

BOTANY.—*New species of the genus Dimorphandra Schott section Pocillum Tul.*<sup>1</sup> ADOLPHE DUCKE, Jardim Botânico, Rio de Janeiro. (Communicated by E. P. KILLIP.)

The genus *Dimorphandra* may be divided into two sections: *Eudimorphandra* and *Pocillum*, which are so natural that it would perhaps be better to consider them as subgenera. They are chiefly distinguished by the fruits, and each has a different geographical distribution. The species of *Eudimorphandra* occur throughout the Amazonian hylaea inclusive of Guiana and in tropical Brazil as far south as Rio de Janeiro and the State of S. Paulo. *Pocillum*, however, is strictly limited to the hylaea.

This latter section now contains 15 species, 10 of which are found in the Brazilian states of Pará and Amazonas, and 5 in British Guiana. One of them, *D. macrostachya* of the slopes of Mount Roraima must be included in the flora of both countries, as well as in that of Amazonian Venezuela. Here occurs also the Brazilian *D. pennigera*. The sole species found in French Guiana, *D. polyandra*, is, according to Sandwith, probably an anomalous form of *D. hohenkerkii* of British Guiana. *D. pennigera*, collected in the Brazilian and Venezuelan Upper Rio Negro, must certainly exist in the neighbouring Colombian territories, and *D. gigantea* grows at the frontier of Peru.

<sup>1</sup> Received January 17, 1934.